17(4) SOV/20-127-3-67/71

AUTHOR: Polezhayev, L. V.

TITLE: Restoration of the Regenerative Capacity of the Extremities of Axolotls After Exposure to X-Rays

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 3, pp 713-716 (USSR)

ABSTRACT: It is known that the exposure to X-rays during a certain interval suppresses the reparative regenerative capacity of some animal species (Refs 1, 3, 5). The homoplastic transplantation of non-irradiated tissues to an extremity which had been exposed to X-rays causes the regeneration of the organ in the place of the transplanted tissues after the amputation of this organ; the quality of the regenerated organ depends on the origin of the transplanted tissue: if an extremity was transplanted an extremity is regenerated, if a tail was transplanted a tail is regenerated (Refs 16, 18). In other words, the non-irradiated tissues of the organs are the source of regeneration. There exist data on the fact that these non-irradiated transplanted tissues involve the irradiated tissues of the organ to which they were transplanted in the regenerative process of the organ. Even non-irradiated tissues (of the heart, the lungs, the liver)

Card 1/3

can stimulate the tissues of the extremities of the axolotl to which they were transplanted to a certain degree of regeneration without regenerating themselves. The author has carried out investigations of the problem mentioned in the title (Refs 6-10) for many years. In the course of these investigations he decided to find out whether some of this methods could be used for the restoration of the suppressed regenerative capacity of the irradiated organs. He experimented on the principle of organo-specificity or biochemical affinity of homologous organs. Regeneration was physiologically influenced by influencing the metabolism of the organism and the concerning organ by tissue proteins and nucleoprotides as well as disintegration products of these two substances from similar organs. 70 hind legs of 40 one-year-old axolotls were operated and exposed to X-rays up to the basis. The other parts of the body were screened by the lead plate (thickness: 4 mm). A dose of 7000 r entirely suppressed the regenerative capacity of the extremities. The results obtained agree well with those obtained by other research workers (Refs 4, 11, 15). But there was also new experience gained:

Restoration of the Regenerative Capacity of the Extremities of Axolotls After Exposure to X-Rays

SOV/20-127-3-67/71

(1) the treatment of axolotls by homogenates of the extremities of axolotls and, above all, rats caused the entire restoration of the regenerative power of the irradiated extremities. (2) Native proteins and, probably, nucleic acids of the non-irradiated tissues seem to be not important in this regeneration. There are 4 figures and 18 references, 15 of which are Soviet.

ASSOCIATION: Institut morfologii zhivotnykh im. A. N. Severtsova Akademii nauk SSSR (Institute of Zoomorphology imeni A. N. Severtsov of the Academy of Sciences, USSR)

PRESENTED: February 28, 1959, by K. I. Skryabin, Academician

SUBMITTED: November 11, 1958

Card 3/3

POLEZHAYEV, L.V.; MANT'YEVA, V.L.

Effect of biological preparations on protein synthesis under normal conditions and in injuries of the myocardium in rats. Eksper. khir. 5 no. 2:52-53 Mr-Ap '60. (MIRA 14:1)
(HEART) (PROTEIN METABOLISM) (BLOOD PROTEINS)

POLEZHAYEV, L.V.

Experimentally induced changes in the growth of the mammalian body and individual organs. Zhur.ob.biol. 21 no.2:138-144 Mr-Ap '60. (MIRA 13:6)

1. Institut morfologii zhivotnykh im. A.N. Severtsova AN SSSR.
(TISSUE EXTRACTS) (GROWTH)

POLEZHAYEV, L.V. (Moskva, 1-ya Cheremushkinskaya ul., 3 (DNR), kv. 97)

"Experimental surgery of the muscles" by A.N. Studitskii. Reviewed by L.V. Polezhaev. Arkh. anat. gist. embr. 39 no. 10:122-124 O '60. (MIRA 14:2)

(MUSCLES--SURGERY) (STUDITSKII, A.N.)

POLEZHAYEV, L.V.; MANT'YEVA, V.L.

Variations in the assimilation of cardiac hydrolysates and extracts by different organs and the effect of these preparations on protein synthesis in normal rats and rats with cardiac injuries. Dokl.AN SSSR 133 no.2:492-495 Jl '60. (MIRA 13:7)

1. Institut morfologii zhivotnykh imeni A.N. Severtsova Akademii nauk SSSR. Predstavleno akademikom A.N.Bakulevym.
(TISSUE EXTRACTS)
(HEART--WOUNDS AND INJURIES)

23841

S/020/61/138/002/024/024
B103/B220

27,1220 also 1565

AUTHORS: Polezhayev, L. V., Teplits, N. A., and Yermakova, N. I.

TITLE: Restoration of the regenerative power of the extremities of Axolotls, which had been suppressed by X-ray irradiation, by means of proteins, nucleic acids, and lyophile tissues

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 138, no. 2, 1961, 477-480

TEXT: The aim of the paper was to clarify whether: 1) the regenerative power suppressed by exposure to X-rays is restored by the injections still to be mentioned, 2) the irradiation effect may be overcome by fresh homogenates of bloodforming organs. Axolotls of black and white breed were tested. They were narcotized in the water by means of ether and then exposed in the X-ray apparatus РУП-200 (RUP-200) to a dose of 7000 r (intensity of dose 636 r/min) for 11 min In case 1) the hind legs, the body being screened off, in case 2) the whole body (dose: 1000 r, intensity of dose 50 r/min) were irradiated. Case 1) 16 to 18 days after irradiation, both hind legs were amputated at the distal part of the tibia. 15 control animals received no further treatment. The remaining Axolotls

Card 1/6

Restoration of the regenerative power...

were treated with injections of 1 ml of the preparation concerned as suspension or solution in 0.65 % physiologic sodium chloride solution for cold-blooded animals applied into the right hind leg or into the muscles of the back. The solvent for acid protein consisted of: KCl 1 g, NaCl 1 g, K_2HPO_4 5 g, H_2O 1000 ml. Case 2) The preparations were injected at the same places, but two days after irradiation. Production of the preparations in case 1): Lyophile tissues in test tubes were frozen at -78°C in a mixture of dry ice and alcohol and dried for 48 hr in the vacuum at -78° and at -10°C to room temperature: liver 2.5 g, spleen 1.0 g, thigh muscles 2.5 g, skin of rats (shaved and cleaned with alcohol) as well as red bone marrow of rabbits 0.3 g. The test tubes containing the dried tissue were sealed and a weighed portion was pulverized before use and mixed with 10.0 ml of the mentioned sodium chloride solution. Fractions of liver cell nuclei were prepared according to the modified method of Shovo (Ref. 2: G. P. Georgiyev et al., Biokhimiya, 25, 318, 1960), ribonucleic acid (RNA) and deoxy ribonucleic acid (DNA) according to the phenol method (Ref. 1); they were free of protein. The acid protein contained neither RNA nor DNA. Production of preparations in case 2):

23841
S/020/61/138/002/024/024
B103/B220

Restoration of the regenerative power...

Tissues forthcoming from liver and spleen of rabbits were pulverized in a mortar and injections of 1.0 ml were applied immediately to the experimental animals. These contained: raw substance of liver 0.1 g, of spleen and red bone marrow 0.03 g each. All preparations were injected for 7 days with daily single doses of: nuclei 0.013 g, DNA 0.002 g, RNA 0.003 g, liver protein 0.11 g, acid protein 0.01 g. The authors studied the modifications produced in the tissues by the above preparations. A regeneration of legs with 5 and 4 toes was regarded as typical, the formation of misshaped legs with 3 or 2 toes as atypical. The formation of conical protuberances, knolls or an uncomplicated cicatrization were considered as missing regeneration. The results are represented in Table 1. The authors state that in this case, contrary to their former experiments and due to inexplicable reasons, the regenerative power of the legs was not suppressed completely by 7000 r, although the difference between test and control was sometimes sufficiently evident. In the second part of the test (case 1), the legs of the control animals were amputated again. This time, the regenerative power was restored in 56.7 % of the cases spontaneously without any additional treatment, whereas after the first amputation 13.3 % of regenerations were found.

Card 3/6

Restoration of the regenerative power...

The most effective means to restore the regenerative power of irradiated legs were found to be: after the first amputation: RNA, then proteins, and finally lyophile muscles; after the second amputation: proteins, RNA, lyophile muscles, and finally spleen. DNA, cell nuclei, and further preparations were ineffective. Thus, the authors conclude that RNA and proteins play a different role in the various stages of the restoration of the regenerative power. In case 2), no success was achieved. The animals grew thin, ate little, were taken ill with Saprolegnia, and finally perished after 1-1.5 months. Intensive degeneration of liver and spleen showed the typical symptoms of irradiation-disease. No differences were perceptible between the control and the experimental animals. There are 1 figure, 1 table, and 11 references: 8 Soviet-bloc and 3 non-Soviet-bloc. The reference to the English-language publication reads as follows: Ref. 10: M. G. Sevag, D. B. Zackmann, J. Smolenz. J. Biol. Chem., 124, 425 (1938).

ASSOCIATION: Institut morfologii zhivotnykh im. A. N. Severtsova Akademii nauk SSSR (Institute of Animal Morphology imeni A. N. Severtsov, Academy of Sciences USSR)

POLEZHAYEV, L.V.; AKHABADZE, L.V.; ZAKHAROVA, N.A.; YAVICH, M.P.

Effect of pyrogenal and myocardial hydrolyzate on the regeneration of the heart muscle. Dokl.AN SSSR 138 no.3:714-717 My '61. (MIRA 14:5)

1. Institut morfologii zhivotnykh im. A.N.Severtsova AN SSSR. Predstavleno akademikom A.N.Bakulevym.

(Heart--Muscle) (Regeneration (Biology))
(Pharmacology) (Tissue extracts)

POLEZHAYEV, L.V.

Transformation of tissues implanted in a dog tooth. Dokl. AN SSSR 141 no.4:994-997 D '61. (MIRA 14:11)

1. Institut morfologii zhivotnykh im. A.N. Severtsova AN SSSR. Predstavleno akademikom Yu.A. Orlovym.
(Tissues—Transplantation)
(Teeth)

MATVEYEVA, Anfwlina Ivanovna[deceased]; POLEZHAYEV, L.V., prof., otv. red.; NIKITINA, O.G., red. izd-va; ASTAF'YEVA, G.A., tekhn. red.

[Replacement of skull defects with regenerating bone; the destruction method] Zameshchenie defektov cherepa regeneriruiushchei kost'iu; metod destruktsii. Moskva, Izd-vo Akad. nauk SSSR, 1962. 136 p. illus. (MIRA 15:3)
(SKULL--WOUNDS AND INJURIES)
(BONE GRAFTING)

S/020/62/144/004/024/024
B144/B138

AUTHORS: Polezhayev, L. V., Teplits, N. A., and Tuchkova, S. Ya.

TITLE: Significance of proteins and ribonucleic acids in the restoration of the x ray-inhibited regenerative capacity of limbs in axolotls

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 144, no. 4, 1962, 930-933

TEXT: This study deals with 4 problems: I) Role of RNA, DNA, and proteins (P) in the regeneration of the limbs of axolotls (A) after irradiation and in the prevention of x-ray ulcers; II) effect of prophylactic RNA and P administration on the regenerative capacity; III) time of optimum effect; IV) effect on radiation disease. There were two test series: a) Local irradiation of the hind limbs with 10,000 r and subsequent amputation, and b) whole-body irradiation with 1000 r. Both included numerous groups with individual or combined administration of RNA, DNA, liver P, and acid P after or before amputation (in a) or irradiation (in b). 90 days after amputation the locally irradiated A were subjected to reamputation. I: Treatment with RNA and P, respectively, after amputation resulted in 33%

Card 1/3

S/020/62/144/004/024/024
B144/B138

Significance of proteins and...

PRESENTED: December 29, 1961, by A. N. Bakulev, Academician

SUBMITTED: December 12, 1961

Card 3/3

POLEZHAYEV, I.V.

Restoration of the regenerative capacity inhibited by X-ray irradiation. Izv. AN SSSR. Ser. biol. 31 no.1: 37-58 Ja-F '66. (MIRA 19:1)

1. Institut morfologii zhivotnykh im. A.N. Severtsova AN SSSR.

L 37259-66 EWT(1)/EWT(m)/T JK

ACC NR: AP6028235 SOURCE CODE: UR/0216/66/000/001/0037/0058

39
B

AUTHOR: Polezhayev, L. V.

ORG: Institute of Animal Morphology im. A. N. Severtsov, AN SSSR (Institut morfologii zhivotnykh AN SSSR)

TITLE: Restoration of regenerative capacity suppressed by irradiation with x-rays 19

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 1, 1966, 37-58

TOPIC TAGS: experiment animal, radiation biologic effect, RNA, tissue physiology, drug effect

ABSTRACT: Research on the subject conducted by the author and his coworkers on axolotls is reviewed. It was established that local irradiation with x-rays in a dose of 7,000-10,000 r suppressed the capacity of axolotls to regenerate amputated legs in an average of 93% of cases. After healing of the wounds on the stumps, x-ray ulcers which did not heal for a long time developed in a number of cases. Injection to axolotls with irradiated legs of homogenates of muscles, liver, and some other tissues of mammals (rats or rabbits), of protein, and quite particularly of freshly prepared RNA with a high degree of polymerization led to restoration of the lost regenerative capacity in 30-35% of cases. When repeated amputation of legs was carried out in addition to this, restoration of the regenerative capacity took place in up to 70-100% of cases.

UDC: 577.391

Card 1/2

0717 1814

GLUKHAYEV, L.V.; MALIOVANOVA, S.D.

Origins and mechanism of regeneration of the mesencephalon in tadpoles of Rana temporaria. Dokl. AN SSSR 165 no.4:951-954 D '65. (MIRA 18:12)

1. Institut morfologii zhivotnykh im. A.N.Severtsova AN SSSR. Submitted January 23, 1965.

POLEZHAYEV, Lev Vladimirovich, prof.; AKHABADZE, Lyubov' Viktorovna; MUZLAYEVA, Nina Andreyevna; YAVICH, Marina Pinkhusovna; KOSOBUTSKIY, V.I., red.

[Stimulation of the regeneration of the heart muscle] Stimuliatsiia regeneratsii myshtsy serdtsa. Moskva, Nauka, 1965. 395 p. (MIRA 18:11)

1. Akademiya nauk SSSR. Institut morfologii zhivotnykh.

POLEZHAYEV, L.V.

Characteristics of changes in the regenerative capacity of the organs in animals. Arkh. anat., gist. i embr. 48 no.2:67-74 F '65. (MIRA 18:8)

1. Institut morfologii zhivotnykh imeni A.N.Severtsova AN SSSR, Moskva.

POLEZHAYEV, L.V.; KOLCHIN, S.P.; SOLNTSEVA, G.N.

Stimulation of regeneration of the heart muscle in diphtherial myocarditis. Dokl. AN SSSR 164 no.4:949-952 O '65. (MIRA 18:10)

1. Institut morfologii zhivotnykh im. A.N.Severtsova AN SSSR.
Submitted April 27, 1965.

L 55949-65

ACCESSION NR: AP5018502 UR/0020/64/159/003/0682/0685

AUTHOR: Polezhayev, L. V.; Teplits, N. A.; Tuchkova, S. Ya.

TITLE: Restoration by means of nucleic acids of the regenerative capacity of the extremities of axolotl after suppression of this capacity by irradiation with x-rays

SOURCE: AN SSSR. Doklady, v. 159, no. 3, 1964, 682-685

TOPIC TAGS: experiment animal, neoplasm, nucleic acid, biologic reproduction, x ray irradiation, ribonucleic acid, desoxyribonucleic acid

Abstract: After local irradiation of both extremities of axolotl with x-rays in a dose of 1,000 r, the regenerative capacity of the extremities following amputation was restored not only by RNA, but also by DNA, if the latter was administered immediately after irradiation and not, as in former experiments, on passage of a time (latent period) during which the after-effects of radiation accumulated. X-ray tumors and nexroses developed on the stumps of extremities that failed to regnerate both in animls treated and not treated with RNA or DNA but did not develop when the capacity for regeneration was restored or when stumps with tumors were amputated or partly amputated after treatment of the animals with RNA. DNA did not prevent tumors

Card 1/2

L 55949-65

ACCESSION NR: AP5018502

in the latter case. On development of x-ray tumors, dedifferentiation, formation of regenerated tissue, and form development leading to regeneration were completely suppressed. Administration to axolotls of freshly prepared, high-polymer RNA immediately after total irradiation with a dose of x-rays producing lethal radiation sickness increased the average time of survival of the animals by a factor of 2. Orig. art. has 6 figures and 1 table.

ASSOCIATION: Institut morfologii zhivotnykh im. A. N. Severtsova Akademii nauk SSSR (Institute of Animal Morphology, Academy of Sciences SSSR)

SUBMITTED: 27Jan64 ENCL: 00 SUB CODE: LS

NO REF SOV: 010 OTHER: 001 JPRS

Card 2/2

POLEZHAYEV, L.V.

"Regeneration of lost organs" by L.D. Liozner. Arkh. anat., gist. i embr. 44 no.4:116-119 Ap '63. (MIRA 17:6)

POLEZHAYEV, L.V. (Moskva V-333, 2-y Akademicheskiy pr., d.4, kv.4); AKHABADZE, L.V.; MUZLAYEVA, N.A.; YAVICH, M.P.

Stimulation of the regeneration of the myocardium in inhibited cicatrization. Grud. khir. 5 no. 2:47-54 Mr-Ap '63. (MIRA 17:2)

1. Iz laboratorii eksperimental'noy morfologii zhivotnykh (zav.-prof. L.V.Polezhayev) Instituta morfologii zhivotnykh imeni A.N. Severtsova (direktor - chlen-korrespondent AN SSSR G.K.Khrushchov).

POLEZHAYEV, L.V.; TEPLITS, N.A.; TUCHKOVA, S.Ya.

Factors in the restoration of the X-ray suppressed regeneration capacity of the extremities in axolotls. Dokl. AN SSSR 150 no.3:694-697 My '63. (MIRA 16:6)

1. Institut morfologii zhivotnykh im. A.N. Severtsova AN SSSR. Predstavleno akademikom A.N. Bakulevym.
(Axolotls) (X rays--Physiological effect)
(Regeneration(Biology))

POLEZHAYEV, L.V.; KARNAUKHOVA, E.N.

Stimulation of the multiplication of nerve cells in the cerebral cortex of mammals. Dokl. AN SSSR 150 no.2:430-433 My '63.
(MIRA 16:5)

1. Predstavleno akademikom K.I.Skryabinym.
(Cerebral cortex) (Nerves, Cranial)

L 10825-63 EWT(m)/BDS/ES(b)--AFFTC/ASD--K
ACCESSION NR: AP3000760 S/0020/63/150/003/0694/0697

AUTHOR: Polezhayev, L. V.; Teplits, N. A.; Tuchkova, S. Ya.

TITLE: Regeneration ability of axolotl extremities after X-ray irradiation

SOURCE: AN SSSR. Doklady, v. 150, no. 3, 1963, 694-697

TOPIC TAGS: amputation trauma, ribonucleic acid, desoxyribonucleic acid, regeneration ability, radiation disease

ABSTRACT: The authors investigated the following in this study: (i) does the regeneration percentage of irradiated extremities increase after repeated amputations on account of the effect of the amputation trauma or does it increase on account of the time factor, in the course of which the irradiated tissues are normalized by the non-irradiated tissues and internal humoral media, (ii) which ribonucleic acid is effective: highly-polymeric, freshly-prepared, or one that has been stored for a long time prior to use, (iii) is desoxyribonucleic acid active, (iv) is it necessary to treat the irradiated animals one or more times with the preparations so that the regenerative effect could be attained, (v) how effective is ribonucleic acid in the fight against radiation disease. Authors conclude that the amputation trauma is appreciable and the time factor does not have too great a

Card 1/2

L 10825-63
ACCESSION NR: AP3000760

bearing on the establishment of regenerative capability of the axolotl's extremities which were suppressed by X-ray irradiation. The biological activity of laboratory-prepared highly-polymeric ribonucleic acid is reduced during prolonged storage. Commercial ribonucleic acid and desoxyribonucleic acid are not biologically-active. The regenerative ability which was suppressed by irradiation can be restored only with a single treatment of the animals with specific doses of ribonucleic acid and albumen. The medicinal and especially prophylactic treatment of the animals with ribonucleic acid increases their resistance and increases their life span by 37% in the case of radiation disease. Orig. art. has: 1 table.

ASSOCIATION: Institut morfologii zhivotny*kh im. A. H. Severtsova, akademii nauk SSSR (Institute of Animal Morphology, Academy of Sciences SSSR)

SUBMITTED: 26Nov62 DATE ACQD: 21Jun63 ENCL: 00

SUB CODE: 00 NO REF SOV: 008 OTHER: 001

lb/lw
Card 2/2

POLEZHAYEV, L.V.; TEPLITS, N.A.; TUCHKOVA, S.Ya.

Role of proteins and nucleic acids in the restoration of the regenerative capacity of the extremities in axolotls, supressed by X rays. Dokl.AN SSSR 144 no.4:930-933 Je '62. (MIRA 15:5)

1. Institut morfologii zhivotnykh im. A.N.Severtsova AN SSSR. Predstavleno akademikom A.N.Bakulevym.
(Regeneration (Biology)) (X rays—Physiological effect)
(Axolotls)

POLEZHAYEV, L.V.; AKHABADZE, L.V.; MUZLAYEVA, N.A.; YAVICH, M.P.

Regeneration of a rat's myocardium as an effect of ribonucleic acid and pyrogenal treatment. Dokl.AN SSSR 145 no.5:1180-1183 '62. (MIRA 15:8)

1. Institut morfologii zhivotnykh im. A.N.Severtsova AN SSSR. Predstavlena akademikom A.N.Bakulevym.
(PYROGENAL) (NUCLEIC ACIDS) (HEART—MUSCLE)
(REGENERATION (BIOLOGY))

POLEZHAYEV, L.V.

Regeneration of the cardiac muscle in rabbits following the implantation of a muscle treated with trypan blue. Dokl.AN SSSR 145 no.3:681-684 Jl '62. (MIRA 15:7)

1. Institut morfologii zhivotnykh imeni A.N.Severtsova AN SSSR. Predstavleno akademikom Yu.A.Orlovym.
(HEART--MUSCLE) (REGENERATION (BIOLOGY)) (TRYPAN BLUE)

L 8222-66 EWT(m)/EWA(d)/EWP(t)/EWP(z)/EWP(b) IJP(c) MJW/JD/JG

ACC NR: AP5026272 SOURCE CODE: UR/0226/65/000/010/0038/0046

AUTHOR: Andreyev, V. V. (Moscow); Bobrov, G. V. (Moscow); Polezhayev, M. A. (Moscow)

ORG: none

TITLE: Manufacturing parts from molybdenum by plasma spraying

SOURCE: Poroshkovaya metallurgiya, no. 10, 1965, 38-46

TOPIC TAGS: metal deposition, molybdenum deposition, molybdenum spraying, plasma spraying, deposited molybdenum structure, deposited molybdenum property, MOLYBDENUM

ABSTRACT: Tubular parts of various sizes and shapes were made of molybdenum by plasma arc spraying on AD-1, AMTs, or D16 aluminum alloy patterns. The spraying was done with a mixture of argon and helium in a 4 to 1 ratio. The deposits were annealed in a hydrogen atmosphere at 1200—1800C for 1—4 hr. The as-sprayed metal consisted of distinct layers of polycrystalline molybdenum interspersed with layers of nonmetallic inclusions and voids. Annealing at 1800C makes the layered structure less distinct and reduces the thickness of the interspersed layer, which then becomes similar to the grain boundaries of cast or wrought metal. Annealing at 1200—1400C, however, had no effect on the structure of deposited metal. A second phase, probably consisting of molybdenum oxides, was identified in the as-sprayed deposit. However, no second phase was observed after annealing at 1800C for 1 hr. The volume shrinkage of deposited molybdenum annealed for 2 hr at 1200, 1400, 1600, and 1800C was 1.0, 1.6, 5.8, and

Card 1/2

L 8222-66

ACC NR: AP5026272

6.4%, respectively. The corresponding figures for the density were 8.50—8.89, 8.54—8.83, 8.66—8.98, and 9.05—9.35 g/cm^3, compared with 8.76—8.95 g/cm^2 for as-sprayed metal. The tensile strength of the as-sprayed molybdenum, 3.1—5.6 dan/mm^2, increased to 8.3—13.5, 18.4—20.1, and 30.1—31.9 dan/mm^2 after annealing at 1800C for 1, 3, and 5 hr, respectively. The as-sprayed molybdenum had a hardness of 128—147.2 H_V; after annealing at 1800C for 1, 3, and 5 hr, the hardness was 171.0 to 225.0, 121.7—153.2, and 119.0—135.0 H_V, respectively. Annealing at 1800C greatly reduced the resistivity of deposit: from 31.8—33.8 mohm·cm for as-sprayed metal to 8.02 mohm·cm (80—85% of the resistivity of cast molybdenum) for metal annealed for 2 hr. Orig. art. has: 4 figures and 5 tables. [MS]

SUB CODE: 13, 11 / SUBM DATE: 06Mar65/ ORIG REF: 005/ OTH REF: 003/ ATD PRESS: 4148

Card 2/2

L 40288-65 EPA(s)-2/EWT(m)/EWP(v)/T/EWP(t)/EWP(k)/EWP(b)/EWA(c) Pf-4 IJP(c)
JD/HM
ACCESSION NR: AP5002890 S/0135/65/000/001/0030/0031 24
B

AUTHOR: Vinogradov, V. S. (Candidate of technical sciences); Polezhayev, M. A. (Engineer)

TITLE: Vacuum tight welding of armco iron to copper

SOURCE: Svarochnoye proizvodstwo, no. 1, 1965, 30-31

TOPIC TAGS: welding, iron copper welding, weld inhomogeneity, weld joint diffusion, armco iron, copper welding

ABSTRACT: The main difficulties during the welding of armco-iron to copper are due to the difference in physico chemical properties of the two metals, the high heat conductivity of copper, and its ability to absorb gases actively. In order to study the problem more closely, the authors welded samples automatically using tungsten electrodes in argon. They uncovered certain non-uniformities in the weld-generated compound. Prolonged exposure to high temperatures (650C) led to intensive diffusion which partly reduced the above-mentioned non-uniformities within the seam. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: MATI

Card 1/2

VINOGRADOV, V.S., kand. tekhn. nauk; POLEMAYEV, M.A., inzh.

Welding vacuum-tight seams to join Armco-iron with copper.
Svar. proizv. no.1:30-31 Ja '[illegible]

(MIRA 18:3)

1. Moskovskiy aviatsionnyy tekhnologicheskiy institut.

ANDREYEV, V.V. (Moskva); BOBROV, G.V. (Moskva); POLEZHAYEV, M.A., (Moskva)

Making molybdenum parts by the method of plasma spraying.
Poroshk. met. 5 no.10:38-46 O '65. (MIRA 18:11)

ANTIPENKO, L.A., inzh.; KUZHAYEV, M.M., inzh.

Results of industrial tests of ejector flotation machines at the "Tomusinskaia 1-2" coal preparation plant. Nauch.trudy KuzNIIUgleobog. no.2:116-122 '64. (MIRA 17:10)

VASIL'YEV, A.D., inzh.; LOCHKAREV, F.A., tekhnik; POLEZHAYEV, M.M., inzh.

Automatic control of the density and flow of pulp in feeding flotation machines at the "Tomusinskaia 1-2" preparation plant. Nauch. trudy Kuz-NIIUgleobog. no.2:132-136 '64. (MIRA 17:10)

POLEZHAYEV, N.A., inzh.

Cutting coarse thread in body parts. Sbor. st. NIITIAZHMASHa Uralmashzavoda no.4:99-109 '64. (MIRA 17:12)

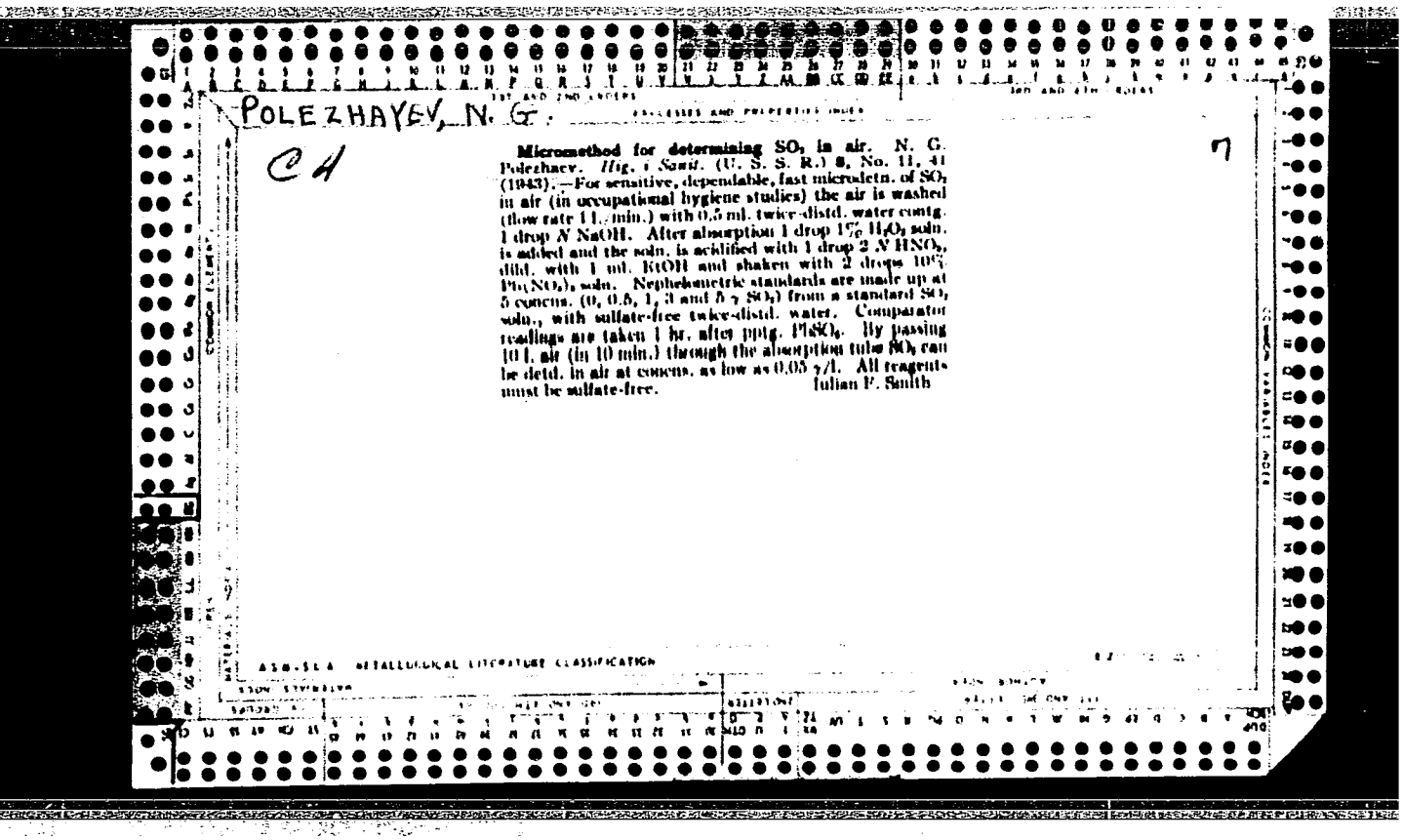
ARBUZOV, B.A.; POLEZHAYEVA, N.A.; VINOGRADOVA, V.S.; SHAMSUTDINOVA, A.K.

Products of interaction of chloroacetone and ω-bromoacetophenone with diphenylphosphinic acid esters. Izv. AN SSSR. Ser. khim. no.4: 669-678 '65. (MIRA 18:5)

1. Khimicheskiy institut im. A.M.Butlerova Kazanskogo gosudarstvennogo universiteta im. V.I.Ul'yanova-Lenina.

POLEZHAYEV, Nikolay Fedorovich

Chaplygin. Lipets, Lipetskoe knizhnoe izd-vo, 1963. 46 p.
(MIRA 17:9)



POLEZHAYEV, N. G.

CH

7

Micromethod for determining SO_2 in air. N. G. Polezhaev. *Hig. i Sanit.* (U. S. S. R.) 8, No. 11, 41 (1943).—For sensitive, dependable, fast microdetn. of SO_2 in air (in occupational hygiene studies) the air is washed (flow rate 11./min.) with 0.5 ml. twice-distd. water contg. 1 drop *N* NaOH. After absorption 1 drop 1% H_2O_2 soln. is added and the soln. is acidified with 1 drop 2 *N* HNO_3, dild. with 1 ml. EtOH and shaken with 2 drops 10% $Pb(NO_3)_2$ soln. Nephelometric standards are made up at 5 concns. (0, 0.5, 1, 3 and 5 γ SO_2) from a standard SO_2 soln., with sulfate-free twice-distd. water. Comparator readings are taken 1 hr. after pptg. $PbSO_4$. By passing 10 l. air (in 10 min.) through the absorption tube SO_2 can be detd. in air at concns. as low as 0.05 γ/l. All reagents must be sulfate-free. Julian F. Smith

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

POLEZHAYEV N. G.

FA151T31

USSR/Medicine - Air Analysis Nov 49
Hygiene

"Methods for Determining the Presence of Sulfurous Gas and Nitrogen Dioxide in the Atmosphere," N. G. Polezhayev, V. V. Girina, Inst of Gen and Communal Hygiene, Acad Med Sci USSR, 3¼ pp

"Gig i San" No 11 - Mp-26-9

Chief changes from known methods of determining small quantities of sulfurous gas in the air are: aspiration method of sampling, use of caustic potassium solution or a 5% solution of $KClO_3$ as absorbents, and introduction of five standard solutions to establish a scale. In determining the

151T31

USSR/Medicine - Air Analysis (Contd) Nov 49

presence of nitrogen dioxide in the air, Greiss' method was used as a basis with a potassium iodide solution as an absorbent.

151T31

POLEZHAYEV, N. G.

USSR/Medicine - Toxic Gases and Vapors Aug 51

"Micromethods for Determining Harmful Substances in Atmospheric Air," N. G. Polezhayev, V. V. Girina, T. Ye. Lartionova, Inst of General and Communal Hygiene, Acad Med Sci USSR

"Gig i San" No 8, pp 15-20.

PA 193T66

In 1949, the Lab of Hygiene of Atm Air, Inst of General and Communal Hygiene, developed micromethods for the detn of Cl_2, SO_2, H_2S, Pb, and Hg in atm air. These methods, described in detail, are based on customary USSR procedures for the detn of these substances in industrial sanitary work. By

193T66

USSR/Medicine - Toxic Gases and Vapors (Contd) Aug 51

replacing the usual absorption appliances with microequipment calibrated accordingly, the sensitivity of the detns was increased considerably.

193T66

POLEZHAYEV, N.G.

Determination of small quantities of lead and zinc in nitrate media without their previous separation. Gig. sanit., Moskva no.2:47-49 Feb 52. (CIML 21:5)

1. Of Moscow Municipal Sanitary Epidemiological Station.

POLEZHAYEV, N. G.

Micromethods for the determination of injurious substances in the open air. N. G. Polezhaev. *Novosti Med.* 1952, No. 20, 84–8.—SO_2 is absorbed in $KClO_3$ soln. and converted to H_2SO_4 and detd. as $BaSO_4$. H_2S is absorbed in an alk. soln. of Na arsenite to form a sol., difficultly oxidizable S salt. In small quantities and in the presence of $AgNO_3$ acidified with H_2SO_4 it forms a yellowish brown sol of Ag_2S, which can be detd. colorimetrically. Cl is absorbed in alk. soln., reduced to chloride with the aid of sulfites, excess of latter oxidized with H_2O_2, the soln. acidified with HNO_3, and the Cl detd. nephelometrically as AgCl. NO_2 converts sulfanilic acid to diazo compds., which react with α-naphthylamine to form a red color, for colorimetric detn. Pb is detd. nephelometrically as the chromate. Hg vapors in excess of I_2 vapors form HgI_2, which is sol. in a soln. of KI forming K_2HgI_4. This is converted by Cu salts and sulfite reduction to a red Cu-Hg-I salt which is detd. colorimetrically.

B. S. Levine

MET

AID P - 3666

Subject : USSR/Medicine

Card 1/1 Pub. 37 - 12/19

Author : Polezhayev, N. G., Kand. Med. Sci.

Title : Methods of determining active chlorine in the air

Periodical : Gig. i. san., 11, 46-47, N 1955

Abstract : Outlines the existing methods of determining chlorine in the air, and describes in detail a method improved by the author.

Institution : Institute of General and Municipal Hygiene, Acad. of Med. Sci., USSR.

Submitted : D 10, 1954

POLEZHAYEV, N. G.

A technique for determination of mercury in the air. N. G. Polezhaev (Inst. General and Munic. Hyg., Acad. Med. Sci., Moscow). *Gigiena i Sanit.* 21, No. 6, 74-6 (1956).—The sampling is done with an absorption bulb which carries in its stream a 2nd bulb contg. I to compensate for loss of I from the 0.025% I soln. in KI used in the absorber proper. The collected sampling is treated with $CuCl_2$ and 3*N* Na_2SO_3, centrifuged, and examd. colorimetrically against a standard scale. The method permits detn. of Hg in 1 hr. with 60-l. sample; limit of sensitivity is 0.3 γ/cu. m.

G. M. Kosolapoff

POLEZHAYEV, N.G.

POLEZHAYEV, N.G., kand.biol.nauk

Determination of free silicon dioxide in the presence of silicates in industrial discharges and atmospheric dust. Gig. i san. 22 no.11: 91-94 N '57. (MIRA 11:1)

1. Iz Instituta obshchey i kommunal'noy gigiyeny AMN SSSR.

(AIR POLLUTION, determ.
by free silicon dioxice in presence of silicates in industrial discharges & atmospheric dust (Rus))
(SILICA, determination,
in dust in indust. (Rus))
(DUST,
silica, determ. in indust. (Rus))

LYUBIMOV, N.A.; Prinimal uchastiye: POLEZHAYEV, N.G.

Nephelometer with automatic twenty-four-hour recording of sulfur dioxide concentrations in the air. Pred. dop. kontsent. atmosf. zagr. no.5:169-179 '61. (MIRA 15:3)

1. Iz Instituta obshchey i kommunal'noy gigiyeny imeni A.N. Sysina AMN SSSR.

(AIR--ANALYSIS)
(SULFUR DIOXIDE)

GOL'DBERG, M.S., doktor med. nauk; GLEBOVA, L.F., kand. med. nauk; DOKUCHAYEVA, V.F., kand. med. nauk; PEKSHIN, A.A., kand. med. nauk; SKVORTSOVA, N.N., kand. med. nauk; KOLEZHAYEV, N.G., kand. biol. nauk; SENDERIKHINA, D.P., kand. biol. nauk; KIMINA, S.N., nauchn. sotr. Prinimal uchastiye NEDOGIBCHENKO, M.K.; LYUDKOVSKAYA, N.I., tekhn. red.

[Methodological instructions on the organization of research on the pollution of air and the study of the effect of atmospheric pollution on the health and sanitary and hygienic living conditions of the population] Instruktivno-metodicheskie ukazaniia po organizatsii issledovaniia zagriazneniia atmosfernogo vozdukha i izucheniia vliianiia atmosfernykh zagriaznenii na zdorov'e i sanitarno-gigienicheskie usloviia zhizni naseleniia. Moskva, Medgiz, 1963. 203 p. (MIRA 16:12)

1. Russia (1923- U.S.S.R.) Vsesoyuznaya gosudarstvennaya sanitarnaya inspektsiya. 2. Starshiy gosudarstvennyy sanitarnyy inspektor Gosudarstvennoy sanitarnoy inspektsii Ministerstva zdravookhraneniya SSSR (for Nedogibchenko).
(Air--Pollution)

POLEZHAYEV, P.P. C/1963 1964

Mining Transportation

DECEASED

POLEZHAYEV, P.V.

All-Union Conference on Mining and Drilling in Prospecting for Deposits. Izv.vys.uchab.zav.; geol. i razv. 6 no.10:151-152 O '63. (MIRA 18:4)

POLEZHAYEV, P.V.

Effect of the depth drilled each time on the core extracted in core drilling in the Sary-Cheku deposit. Uch. zap. SAIGIMSa no.7:193-196 '62. (MIRA 17:2)

1. Moskovskiy geologorazvedochnyy institut.

POLEZHAYEV, P.V.

Sampling of well cuttings for geological examination during core drilling. Izv. vys. ucheb. zav.; geol. i razved. 3 no. 10:110-120 O '60. (MIRA 13:12)

1. Moskovskiy geologorazvedochnyy institut imeni S. Ordzhonikidze.
(Core drilling)

POLEZHAYEV, P.V.

Relationship between the amount drilled per trip and the core recovery in core drilling in medium-hard and hard rocks. Razved. i okh. nedr 28 no.2:14-20 F '62. (MIRA 15:3)

1. Moskovskiy geologorazvedochnyy institut.
(Core drilling)

Polezhayev, S.A.

K-5

USSR / Forestry. Forest Plants.

Abs Jour: Ref Zhur - Biologiya, No. 1, 1958, 1361

Author : Pesterov, A.P., Polezhayev, S.A.

Title : Aerial Sowing as One of the Productive Methods of Artificial Renovation of the Forests of the North

Orig Pub: Tr. nauchn. konferentsii po izuch. Vologodsk. obl., Vologda, 1956, 229-249

Abstract: This is a description of experience in the application of aerial sowing in the forest economies of Vologodskaya oblast' between 1940 and 1954. The positive forestry-technical and economic results of reforesting the treeless areas of various categories, especially those devastated by fire, by using aerial sowing are

Card 1/2

GRIGOR'YEV, Il'ya Aleksandrovich; POLEZHAYEV, Sergey Aleksandrovich; PESTEREV, Andrey Petrovich; PISMENNYY, N.R., red.; SVETLAYEVA, A.S., red.izd-va; PARAKHINA, N.L., tekhn.red.

[Using airplane seeding in forestry] Primenenie aeroseva v lesnom khozialstve. Moskva, Goslesbumizdat, 1959. 69 p. (MIRA 14:2)

(Afforestation) (Aeronautics in agriculture)

POLEZHAYEV, V.; SHEVCHENKO, S.

Fifth session of the Committe for the Development of Foreign Trade [with summary in English, p.41]. Vnesh. torg. 27 no.1:4-9 '57. (Geneva--Commerce--Congresses) (MLRA 10:4)

POLEZHAYEV, V.

Economic problems at the 24th session of the Economic and Social Council of the UN. Vnesh. torg. 27 no.9:12-18 '57. (MLRA 10:9)
(Commerce) (United Nations)

POLEZHAYEV, V.

For the extension of international economic relations [with English summary in insert]. Vnesh.torg. 28 no.11:6-11 N '58. (MIRA 11:12)

(Russia--Commerce)

POLEZHAYEV, V.

The Seventh Session of the Committee for the Development of Trade under the United Nations Economic Commission for Europe. Vnesh.torg. 28 [i.e. 29] no.1:10-14 '59. (MIRA 12:2)
(United Nations Economic Commission for Europe)

POLEZHAYEV, V.

Eighth session of the Committee for the Development of Foreign Trade of the U.N. Economic Commission for Europe. Vnesh. torg. 29 no.12:30-31 '59. (MIRA 12:12)
(Europe--Commerce)

POLEZHAYEV, V., polkovnik

Practice fire with a range finder. Voen.vest. 43 no.10:84-85 O '63. (MIRA 16:12)

POLEZHAYEV, V.A.

"The Cost-Price of Oil-Bearing Flax and Ways of Lowering It";

dissertation for the degree of Candidate of Economic Sciences
(awarded by the Timiryazev Agricultural Academy, 1962)

(Izvestiya Timiryazevskoy Sel'skokhozyaystvennoy Akademii, Moscow, No. 2, 1963, pp 232-236)

PEREMYKIN, V.I.; POLEZHAYEV, V.A.

Split harvesting of oil flax is an important means of increasing the production of vegetable oil. Masl.-zhir. prom. 24 no. 8:4-6 '58. (MIRA 11:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslichnykh i efiromaslichnykh kul'tur.
(Flax--Harvesting)

POLEZHAYEV, V.A.

Chemical weeding of oil-bearing flax is an important means for increasing the production of vegetable oil. Masl.-zhir.prom. 25 no.6:29-30 '59. (MIRA 12:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslichnykh i efiro-maslichnykh kul'tur.
(Flax) (Weed control)

POLEZHAYEV, V.D., deputat

We can and must build high-quality buildings. Gor.khoz.Mosk. 34 no.2:33-35 F '60. (MIRA 13:6)

1. Predsedatel' Postoyannoy komissii zhilishchnogo i kul'turno-bytovogo stroitel'stva Moskovskogo Soveta.
(Moscow--Building)

POLEZHAYEV, V.D.

Outlook for the expansion of the Moscow subway. Gor.khoz.Mosk. 34 no.7:8-9 Jl '60. (MIRA 13:7)

1. Nachal'nik Metrostroya.
(Moscow--Subways)

POLEZHAYEV, V.D.

New subway lines. Gor. khoz. Mosk. 35 no.11:15-18 N '61. (MIRA 16:7)

1. Nachal'nik Upravleniya stroitel'stva ordena Lenina i ordena Trudovogo Krasnogo Znameni Moskovskogo metropolitena imeni V.I.Lenina Ministerstva transportnogo stroitel'stva SSSR.
(Moscow--Subways)

POLEZHAYEV, V.D.

Kaluga radius of the subway. Gor.khoz.Mosk. 36 no.11:5-9 N '62. (MIRA 15:12)

1. Nachal'nik Upravleniya stroitel'stva ordena Lenina i ordena Trudovogo Krasnogo Znameni Moskovskogo metropolitena im. Lenina Ministerstva transportnogo stroitel'stva SSSR.
(Moscow—Subways)

POLEZHAYEV, V.D.

Construction of traffic intersections. Gor. khoz. Mosk. 36 no.3:23-25 Mr '62. (MIRA 15:6)

1. Nachal'nik Upravleniya stroitel'stva ordena Lenina i ordena Trudovogo Krasnogo Znameni Moskovskogo metropolitena imeni Lenina Ministerstva transportnogo stroitel'stva SSSR.
(City traffic)

POLEZHAYEV, V. G.

POLEZHAYEV, V. G. "The ability of rats to gnaw through sealing material", Trudy Tsentr. nauch.-issled. dezinfekts. in-ta, Issue 5, 1949, p. 217-22.

SO: U-4631, 16 Sept 53, (Letopis 'Zhurnal 'nykh Statey, No. 24, 1949).

POLEZHAYEV, V.G., kand.biol.nauk

Exterminate rodents. Zdorov'e 7 no.1:31 Ja '61. (MIRA 13:12)
(RODENT CONTROL)

POLEZHAYEV, V.G., kand.biologicheskikh nauk

There shouldn't be any flies in the apartment! Zdorov'e 7 no. 5:31 My '61. (MIRA 14:4)

(FLIES--EXTERMINATION)

POLEZHAYEV, V.G.; KIRIN, L.A.; TUROV, I.S.; RYUMIN, A.V.; PARNES, Ya.A., red.; BAIDINA, N.F., tekhn.red.

[Short manual on the control of rodents in rural areas] Kratkoe rukovodstvo po bor'be s gryzunami v sel'skoi mestnosti. Moskva, Medgiz, 1962. 56 p. (MIRA 15:4)
(Rodent control)

VASHKOV, V.I.; ISTOMINA, T.I.; POGODINA, L.N.; POLEZHAYEV, V.G.; TIMONICH, O.P.; POZIN, Z.S., red.; PETROVA, N.K., tekhn. red.

[Handbook on disinfection, disinfestation and deratization] Spravochnik po dezinfektsii, dezinsektsii i deratizatsii. Moskva, Medgiz, 1962. 166 p. (MIRA15:10)
(INSECTS, INJURIOUS AND BENEFICIAL—CONTROL)
(DISINFECTION AND DISINFECTANTS) (RODENT CONTROL)

POLEZHAYEV, V.G., kand. biolog. nauk

Controlling rodents in barns, granaries, and storerooms. Zashch. rast. ot vred. i bol. 7 no.12:37-38 D '62. (MIRA 16:7)

(Grain--Storage) (Rodent control)

POLEZHAYEV, V.G., mayor meditsinskoy sluzhby

Diagnosis of pneumonia in preventive fluorography of servicemen.
Voen.-med. zhur. no. 1:35-38 Ja '66 (MIRA 19:1)

SHUTOV, V.K.; POLEZHAY, V.G.; TERESHCHENKO, N.A.

Turbulent mixers. Mekh. stroi. 21 no.3:22-23 Mr '64. (MIRA 17:3)

1. KuzNIIshakhtostroy.

PoLezHayEV, V. G.

V. G. Polezhayev — Isolated Tibial Fractures of the "gremstick" Type in Adults.

Three isolated subperiosteal tibial fractures were observed at the junction of the middle and lower third. The mechanism of the fractures was simple: in running along the deck of the ship or up the inclined ladder the patient struck the middle third of the left leg against the coaming (one case) or against a rung of the inclined ladder (two cases). The clinical picture of such fractures was devoid of classic signs: the injured extremity was not deformed, there was no mobility or crepitation of the fragments and, most important, the function of the extremity was preserved to a certain degree. All the patients came to the outpatient clinic independently. The X-ray pictures of the isolated subperiosteal fractures were very similar to one another.

137

A transverse fracture line was located subperiosteally at the junction of the middle and lower third of the left tibia. There was no displacement of the fragments. The fracture was of the "gremstick" type.

Voyenno-Meditsinskiy Zhurnal, No 9, 1959.

POLEZHAYEV, V.G.

"New Deratization Substances."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

POLEZHAYEV, V.G., starshiy leytenant meditsinskoy sluzhby

X-ray study of the gastrointestinal tract by gradual filling with barium gel. Voen.-med. zhur. no. 6:74 Je '60. (MIRA 13:7)

(DIGESTIVE ORGANS—RADIOGRAPHY) (BARIUM)

POLEZHAYEV, V.I., slesar'

Device for slow cooling welded pipe seams under winter conditions. Rats. i izobr. predl. v stroi. no.92:17 '54. (MLRA 8:6)
(Pipe, Steel--Welding)

POLEZHAYEV, V.I.; KASHIN, L.A.

Stereotopographic work in field parties. Geod.i kart. no.6:50-53 Ag '56. (MLRA 9:11)

(Topographical surveying)

SOV/6-59-7-5/25

3(4)
AUTHORS: Polezhayev, V. I., Sazonov, V. A., Salomatin, S. A.

TITLE: On the Personnel of the North-Caucasus Aerogeodetic Service (O lyudyakh Severo-Kavkazskogo aerogeodezicheskogo predpriyatiya)

PERIODICAL: Geodeziya i kartografiya, 1959, Nr 7, pp 21 - 24 (USSR)

ABSTRACT: The enterprise mentioned in the title was established in January 1945. It disposes of a photographic laboratory, a photogrammetric and a stereotopographic workshop, as well as of highly qualified cooperators. A survey of the meritorious cooperators is given here. Aleksey Ivanovich Kayukov, Chief Technician, has built signals since 1925. One of the most highly qualified engineers is the Land Surveyor Pavel Ivanovich Kolin'ko who has worked since 1930. Aleksey Yevgen'yevich Garbarev has worked in the field since 1931. Aleksandr Nikolayevich Il'in, Topographer, started his activity in 1924, and is at present Chief Engineer Inspector in the department for technical control. Ivan Tikhonovich Velikanov, Topographer, has been working 25 years in the field. Vladimir Georgiyevich Tkachev has worked as a Topographer since 1931. Yevgeniy Nikolayevich Vasyutkin has been working 25 years, including some years in the Taiga

Card 1/3

of the Soviet Far East. His work is described in the book by G. A. Fedoseyev. The leaders of the largest parties of the department are Yu. N. Bochkov and M. I. Kalganov. Among the young cooperators, the following are mentioned: Margarita Dement'yevna Dubrova has worked for 5 years and is the best Topographer of the enterprise. She completed her studies at the Leningradskiy topograficheskiy tekhnikum (Leningrad Topographical Plant). The pupils of the Tbilisskiy topograficheskiy tekhnikum (Tbilisi Topographical Plant), the Members of the Komsomol Genrikh Grigor'yevich Ozhegov and Valentina Grigor'yevna Ozhegova have become the best cooperators within 5 years. At present, they are studying at a university. Yevgeniy Andreyevich Pavlyukov, Topographer, attended the course of topographers in 1954. Engineer Petr Nikolayevich Pronchenko attended the MIIGAiK in 1956, conducted a party since 1958, and is at present Chief Engineer of the topographical department. Valeriy Mikhaylovich Izvekov attended the L'vovskiy politekhnicheskiy institut (L'vov Polytechnical Plant) and has been a party leader since 1959. Mikhail Petrovich Galkin attended the Kiyevskiy topograficheskiy tekhnikum (Kiyev Topo-

graphical School). Mariya Selivanovna Abramova, Topographer, attended the same school in 1956. V. M. Filippova, G. A. Yurkova, V. S. Mel'nikova, K. F. Ovsyannikova, and T. B. Malakhova have worked for over 10 years as draftswomen in the final compilation of topographic maps. More than 120 topographer-technicians, draftsmen and other cooperators are studying at the correspondence secondary schools and universities, such as: Yu. M. Nikitin, Chief-Topographer, L. N. Nikitina, Map Editor, V. M. Sapatova, Technician, Yu. N. Vostrikov, Technician. The following persons have already completed their studies: Comrade A. G. Kariy, P. F. Dobritsa, L. Ye. Mikhaylov, I. I. Belyakov, V. K. Shevchenko, Ye. I. Demeshko, B. G. Telezhkin attended the Kiyevskiy topograficheskiy tekhnikum (Kiyev Topographical School). G. A. Chernova, Chief-Technician, attended the Leningradskiy gosudarstvennyy universitet (Leningrad State University).

S/096/62/000/002/006/008
E031/E584

26.5100

AUTHORS: Petrazhitskiy, G.B., Candidate of Technical Sciences and Polezhayev, V.I., Engineer

TITLE: An engineering method of calculating the non-stationary heat conduction in thin sandwich walls

PERIODICAL: Teploenergetika, no.2, 1962, 73-76

TEXT: An absolutely stable finite difference scheme is proposed for the one-dimensional heat conduction equation in which, for given Δx, the size of the time step is only bounded by the permissible error of the approximation resulting from the replacement of the differential equation by finite difference equations. An implicit finite difference relation for the temperature on the boundary corresponding to boundary conditions of the third kind can be obtained from the equation of heat balance for a boundary layer of thickness $\Delta x/2$ calculated for the next time step. A direct method of solving the resulting system of algebraic equations is described. The method is applicable in the case of radiation from the boundaries and methods of linearising the radiative terms are discussed. In

Card 1/2

ACC NR: AP7001569 SOURCE CODE: UR/0421/66/000/006/0034/0044

AUTHOR: Polezhayev, V. I. (Moscow)

ORG: none

TITLE: Numerical solution of a system of one-dimensional unsteady Navier-Stokes equations for a compressible gas

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 6, 1966, 34-44

TOPIC TAGS: Navier Stokes equation, compressible gas flow, gas dynamics, unsteady flow, viscous fluid, shock wave, finite difference

ABSTRACT: The solution of the one-dimensional, unsteady, compressible Navier-Stokes equations is discussed using a finite difference scheme. The governing equations are nondimensionalized and reduced to the form

$$\frac{\partial u}{\partial t}+u\frac{\partial u}{\partial x}=-\frac{1}{\varkappa\rho C_M^2}\frac{\partial p}{\partial x}+\frac{1}{\rho C_R}\frac{\partial}{\partial x}\mu^*\frac{\partial u}{\partial x}+C_F,\ \frac{\partial\rho}{\partial t}+\frac{\partial\rho u}{\partial x}=0$$

$$\frac{\partial T}{\partial t}+u\frac{\partial T}{\partial x}=\frac{\varkappa}{\rho c_v C_R P}\frac{\partial}{\partial x}k\frac{\partial T}{\partial x}-\frac{C_1}{\rho c_v}p\frac{\partial u}{\partial x}+\frac{\mu^* C_e}{\rho c_v C_R}\left(\frac{\partial u}{\partial x}\right)^2$$

where the various nondimensional quantities are given by

$$\varkappa=\frac{c_{p_1}}{c_{v_1}},\quad C_M=\frac{V_1}{\sqrt{\varkappa p_1/\rho_1}},\quad C_R=\frac{V_1 L}{\mu_1}\rho_1,\quad C_F=\frac{X_L}{V_1^2},\quad P=\frac{\mu_1 c_{p_1}}{k_1}$$

Card 1/2

ACC NR: AP7001569

$$C_1 = \frac{p_1}{\rho_1 c_{v_1} T_1}, \quad C_e = \frac{V_1^2}{c_{v_1} T_1}.$$

The thermal conductivity, viscosity, and the specific heat are assumed to be functions of the temperature. These equations are written in a finite difference form using the explicit scheme with the stability criterion

$$\tau \sim \min\left\{\frac{h}{|u| + 1/C_M}, C_R h^2\right\}.$$

Three physical problems are solved with this method. The first considers the structure of a one-dimensional shock wave with the viscosity varying according to the Sutherland law. The results agree very well with the exact solution (for a Prandtl number of 0.75). The second problem deals with the flow of a gas between two plane walls, the temperature on one of which is suddenly raised to a level T_{w2}. The resulting temperature, velocity, and pressure waves are calculated with different mesh sizes, and the results are compared. The third case considers the propagation of initial discontinuities in the temperature, density, and pressure in an otherwise homogeneous infinite gas. Orig. art. has: 22 equations and 9 figures.

SUB CODE: 20/ SUBM DATE: 13Jun66/ ORIG REF: 009/ OTH REF: 006

Card 2/2

L 15745-63 EWP(r)/BDS S/0124/63/000/005/V011/V011

ACCESSION NR: AR3002685 52

SOURCE: Rzh. Mekhanika, Abs. 5V77

AUTHOR: Shevlyakov, Yu.A.; Polezhayev, V. M.; Rozenberg, L. B.

TITLE: Experimental study of the stress-deformed state of mildly sloping spherical shells 24

CITED SOURCE: Nauchn. zap. Dnepropetr. un-t, v. 55, 1961, 3-10

TOPIC TAGS: shell, stress, sag, strain, deformation, slope, spherical sphere, force

TRANSLATION: A short account of the experimental determination of the deformation of a thin shell with gently sloping surface, and hinge fastened edges, loaded at the top by a concentrated vertical force. The height of the rise of the shell was less than 1/5 the magnitude of its base. The studied shells were stamped from steel sheets.

A description is given of the set-up for determination of the sagging of the shell on the UIM-500 and the measuring apparatus for determination

Card 1/2

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ACCESSION NR: AR3002685 0

of the deformation at the surface of the shell.
Comparison is made of experimental data on the sag and deformation with the theoretical data calculated in (Nauchn. zap. Dnepropetr. un-t, 1961, 55, 49-72 RZh Mekh, 1962, 10V70) There are misprints. A.A. Shpak

DATE ACQ: 14Jun63 SUB CODE: PH ENCL: 00

Card 2/2

124-1957-1-287

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 34 (USSR)

AUTHORS: Polezhayev, V. M., Rozenberg, L. B., Zagubizhenko, P. A.

TITLE: Experimental Investigation of the Aerodynamic Characteristics of Automobile Fans (Eksperimental'noye issledovaniya aerodinamicheskikh kharakteristik avtomobil'nykh ventilyatorov)

PERIODICAL: Nauch. zap. Dnepropetrov. un-ta, 1953, Nr 41, pp 111-119

ABSTRACT: Results of the experimental investigation of the aerodynamic characteristics of automobile fans are shown for the foreign makes GMC, International, and White.

I. S. Simonov

1. Automobiles 2. Fans--Aerodynamic characteristics

Card 1/1

137-58-2-2899

POLEZHAYEV, V.M.

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 99 (USSR)

AUTHORS: Tul'chinskiy, B.G., Polezhayev, V.M., Rozenberg, L.B.

TITLE: The Force Exerted in Heading Bolts in the Manufacture of Bolts on Cold-upsetting Machines (Eksperimental'noye issledovaniye sily vysadki golovki bolta pri izgotovlenii yego na kholodnovysadochnom avtomate)

PERIODICAL: Nauchn. zap. Dnepropetr. un-t, 1956, Vol 45, pp 177-181

ABSTRACT: An account is given of methods derived and results obtained from an experimental investigation made under production conditions at the Dnepropetrovsk Metal-goods Plant. The investigation consisted in recording on a loop oscillograph the force exerted by the first and second upsetting passes, the operation of the forming punch, and the readings of a timing device - with the aid of wire strain gages pasted to the surface of the forming punch. It was found that the maximum force exerted by the first and second upsetting pass differed from the maximum static-compression force by anywhere up to 5 percent. Attention is drawn to the great disparity in the magnitude of the force as computed with the formula given in the book "Vysadochnyye i otreznyye pressy-avtomaty"

Card 1/2

137-58-2-2899

The Force Exerted in Heading Bolts in the Manufacture of Bolts (cont.)

(Automatic Upsetting and Shearing Presses) by G.A.Navrotskiy and its magnitude as determined in the present investigation.

G.F.

1. Bolts—Manufacture 2. Forge presses—Performance—Test results

Card 2/2

POLEZHAYEV, Valentin Nikolayevich; KAPELINSKIY, Yu.N., red.; ISKANDARYAN, A.A., red. izd-va; TSAGURIYA, G.M., tekhn. red.

[Foreign trade as an important factor of peaceful coexistence] Vneshniaia torgovlia - vazhnyi faktor mirnogo sosushchestvovaniia. Moskva, Vneshtorgizdat, 1962. 58 p. (MIRA 15:11)

(Russia--Commerce)

POLEZHAYEV, Valentin Nikolayevich; YAKOBSON, Gustav Maksimovich; YERMACHKOVA, G.S., red.izd-va; PAVLOVSKIY, A.A., tekhn. red.

[International economic organizations and agreements] Mezhdunarodnye ekonomicheskie organizatsii i soglasheniia. Moskva, Vneshtorgizdat, 1961. 265 p. (MIRA 14:9)
(International organizations) (Commercial treaties)